IN THE CLAIMS:

A complete listing of the Claims is set forth below. Please amend the Claims as follows:

1 – 18.   (Cancelled).

19.   **(Currently Amended)** A computer-implemented method for inventory management, the method performed using a computer system comprising one or more processing units and one or more memory units, the method comprising:

using the computer system, determining a first cumulative demand value for each of a plurality of time windows within a first planning horizon, the first cumulative demand value for a time window representing a cumulative demand for at least one product over the time window and all previous time windows in the first planning horizon;

using the computer system, determining a first forecasted production quantity value for the first planning horizon using a first total forecasted demand value that represents total demand for the product during the first planning horizon, the first forecasted production quantity value representing an estimated quantity of the product to be manufactured during each time window of the first planning horizon;

using the computer system, determining a cumulative production value for each time window of the first planning horizon using the first forecasted production quantity value; ~~value, the cumulative production value for a time window representing a cumulative quantity of the product that can be manufactured over the time window and all previous time windows in the first planning horizon;~~

using the computer system, determining a first lean buffer stock value using the first cumulative demand values and the cumulative production values for the first planning horizon, the first lean buffer stock value representing a quantity of the product to use as a lean buffer stock for the first planning horizon;

using the computer system, determining a second cumulative demand value for each of a plurality of time windows within a second planning horizon preceding the first planning horizon;

using the computer system, determining a second forecasted production quantity value for the second planning horizon using the first lean buffer stock value and a second total forecasted demand value that represents total demand for the product during the second planning horizon;

using the computer system, determining a cumulative production value for each time window of the second planning horizon using the second forecasted production quantity value;

using the computer system, determining a second lean buffer stock value using the second cumulative demand values and the cumulative production values for the second planning horizon, the second lean buffer stock value representing a quantity of the product to use as a lean buffer stock for the second planning horizon; and

using the computer system, making the first and second lean buffer stock values available for use in manufacturing the product.

20.   **(Currently Amended)** Software for inventory management, the software embodied in at least one computer-readable medium and, when executed on a computer system comprising one or more processing units and one or more memory units, operable to:

using the computer system, determine a <u>first</u> cumulative demand value for each of a plurality of time windows within a first planning horizon, the <u>first</u> cumulative demand value for a time window representing a cumulative demand for at least one product over the time window and all previous time windows in the first planning horizon;

using the computer system, determine a first forecasted production quantity value for the first planning horizon using a first total forecasted demand value that represents total demand for the product during the first planning horizon, the first forecasted production quantity value representing an estimated quantity of the product to be manufactured during each time window of the first planning horizon;

using the computer system, determine a cumulative production value for each time window of the first planning horizon using the first forecasted production quantity value; value, the cumulative production value for a time window representing a cumulative quantity of the product that can be manufactured over the time window and all previous time windows in the first planning horizon;

using the computer system, determine a first lean buffer stock value using the <u>first</u> cumulative demand values and the cumulative production values for the first planning horizon, the first lean buffer stock value representing a quantity of the product to use as a lean buffer stock for the first planning horizon;

using the computer system, determine a <u>second</u> cumulative demand value for each of a plurality of time windows within a second planning horizon preceding the first planning horizon;

using the computer system, determine a second forecasted production quantity value for the second planning horizon using the first lean buffer stock value and a second total forecasted demand value that represents total demand for the product during the second planning horizon;

using the computer system, determine a cumulative production value for each time window of the second planning horizon using the second forecasted production quantity value;

using the computer system, determine a second lean buffer stock value using the second cumulative demand values and the cumulative production values for the second planning horizon, the second lean buffer stock value representing a quantity of the product to use as a lean buffer stock for the second planning horizon; and

using the computer system, make the first and second lean buffer stock values available for use in manufacturing the product.

21.   **(Currently Amended)** A computer-implemented system for inventory management, comprising:

computer memory containing:

a first cumulative demand value for each of a plurality of time windows within a first planning horizon, the first cumulative demand value for a time window representing a cumulative demand for at least one product over the time window and all previous time windows in the first planning horizon; and

a second cumulative demand value for each of a plurality of time windows within a second planning horizon preceding the first planning horizon; and

one or more computer processors collectively operable to:

determine a first forecasted production quantity value for the first planning horizon using a first total forecasted demand value that represents total demand for the product during the first planning horizon, the first forecasted production quantity value representing an estimated quantity of the product to be manufactured during each time window of the first planning horizon;

determine a cumulative production value for each time window of the first planning horizon using the first forecasted production quantity value; ~~value, the cumulative production value for a time window representing a cumulative quantity of the product that can be manufactured over the time window and all previous time windows in the first planning horizon;~~

determine a first lean buffer stock value using the first cumulative demand values and the cumulative production values for the first planning horizon, the first lean buffer stock value representing a quantity of the product to use as a lean buffer stock for the first planning horizon;

determine a second forecasted production quantity value for the second planning horizon using the first lean buffer stock value and a second total forecasted demand value that represents total demand for the product during the second planning horizon;

determine a cumulative production value for each time window of the second planning horizon using the second forecasted production quantity value;

determine a second lean buffer stock value using the <u>second</u> cumulative demand values and the cumulative production values for the second planning horizon, the second lean buffer stock value representing a quantity of the product to use as a lean buffer stock for the second planning horizon; and

make the first and second lean buffer stock values available for use in manufacturing the product.

22 – 24. **(Cancelled)**.

25. **(New)** The method of Claim 19, wherein determining the first lean buffer stock value comprises:

determining a difference between the first cumulative demand value and the cumulative production value for each time window; and

selecting the largest positive difference among all the time windows as the first lean buffer stock value.

26. **(New)** The method of Claim 19, wherein determining the second lean buffer stock value comprises:

determining a difference between the second cumulative demand value and the cumulative production value for each time window; and

selecting the largest positive difference among all the time windows as the second lean buffer stock value.

27. **(New)** The method of Claim 19, wherein the cumulative production value is determined by summing the first forecasted production quantity values over the particular time window and all previous time windows in the first planning horizon.

28.   (New) The method of Claim 27, wherein the first forecasted production quantity value is determined by dividing the first total forecasted demand value representing a first total forecasted demand for the product over all time windows by the number of time windows.

29.   (New) The method of Claim 19, wherein cumulative production value is determined by summing the second forecasted production quantity values over the particular time window and all previous time windows in the second planning horizon.

30.   (New) The method of Claim 29, wherein the second forecasted production quantity value is determined by dividing the second total forecasted demand value representing a second total forecasted demand for the product over all time windows by the number of time windows.

31.   (New) The software of Claim 20, wherein the software is operable to determine the first lean buffer stock value by:

determining a difference between the first cumulative demand value and the cumulative production value for each time window; and

selecting the largest positive difference among all the time windows as the first lean buffer stock value.

32.   (New) The software of Claim 20, wherein the software is operable to determine the second lean buffer stock value by:

determining a difference between the second cumulative demand value and the cumulative production value for each time window; and

selecting the largest positive difference among all the time windows as the second lean buffer stock value.

33. **(New)** The software of Claim 20, wherein the software is operable to determine the cumulative production value by summing the first forecasted production quantity values over the particular time window and all previous time windows in the first planning horizon.

34. **(New)** The software of Claim 33, wherein the software is further operable to determine the first forecasted production quantity value by dividing the first total forecasted demand value representing a first total forecasted demand for the product over all time windows by the number of time windows.

35. **(New)** The software of Claim 20, wherein the software is operable to determine the cumulative production value by summing the second forecasted production quantity values over the particular time window and all previous time windows in the second planning horizon.

36. **(New)** The software of Claim 35, wherein the software is further operable to determine the second forecasted production quantity value by dividing the second total forecasted demand value representing a second total forecasted demand for the product over all time windows by the number of time windows.

37. **(New)** The system of Claim 21, wherein the processor is operable to determine the first lean buffer stock value by:

determining a difference between the first cumulative demand value and the cumulative production value for each time window; and

selecting the largest positive difference among all the time windows as the first lean buffer stock value.

38.   (New) The system of Claim 21, wherein the processor is operable to determine the second lean buffer stock value by:

determining a difference between the second cumulative demand value and the cumulative production value for each time window; and

selecting the largest positive difference among all the time windows as the second lean buffer stock value.

39.   (New) The system of Claim 21, wherein the processor is operable to determine the cumulative production value by summing the first forecasted production quantity values over the particular time window and all previous time windows in the first planning horizon.

40.   (New) The system of Claim 39, wherein the processor is further operable to determine the first forecasted production quantity value by dividing the first total forecasted demand value representing a first total forecasted demand for the product over all time windows by the number of time windows.

41.   (New) The system of Claim 21, wherein the processor is operable to determine the cumulative production value by summing the second forecasted production quantity values over the particular time window and all previous time windows in the second planning horizon.

42.   (New) The system of Claim 41, wherein the processor is further operable to determine the second forecasted production quantity value by dividing the second total forecasted demand value representing a second total forecasted demand for the product over all time windows by the number of time windows.